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Activity 4 - Structure Testing Practice Questions

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The Cinema Chain

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Task Scenario

You have been asked to create a database for the East Berkshire Cinema Multiplex. Currently all records are stored on a spreadsheet.

The surgery would like to be able to store and report data on how the cinema is used. The cinema has two screens, one has 500 seats, the other has 400 seats

The cinema has several films showing and it records the different types of film.

Films belong to categories U, PG, 12, 15 and 18.

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Task Scenario

When people go to the cinema they can:

Pick the screen

Pick the date of the performance

Book tickets. The minimum number booked is 1 and the maximum booked is 5

Pick the seat type – standard seating is £10, Luxury seating is £15, Premium is £20

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The Data.

BookingID	ScreenID	FilmID	Booking Date	Film Title	Film rating	Screen Seats	Screen Name	Num Tickets	Seat ID	Seat Type	Seat Price
101	1	27	21/07/2020	Jaws	PG	500	A	4	1	Standard	£10

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Structure Testing

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How To Carry Out Testing

- In order to test if your database works, you will need some test data.
- You could use data that you know will work.
- You may need to use data that is deliberately wrong.
- This is to make sure that your database rejects any data that is incorrect.
- This is your test data.
- You are testing your database to make sure it works with **GOOD** and **BAD** data.

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How To Carry Out Testing

For example, if you have a column that expects a word **NO BIGGER** than 8 letters.

You need to test it with a 6-letter word, and this should be **FINE.**

You need to test it with a 10-letter word, and this should make your database show an **ERROR MESSAGE.**

If you do not see an error message, then you have not configured your database properly.

You would need to check with both pieces of data to make sure your database is working.

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The Types of Test Data

Imagine we have table of Customers.

One of the table columns is “Age”.

It is designed with the datatype Integer.

A typical piece of data that could be entered is 47.

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The Types of Test Data

Test Data Type	Letter	Meaning	Example
Normal	N	Ordinary data that can be input into a column	Enter 47 into the Age column

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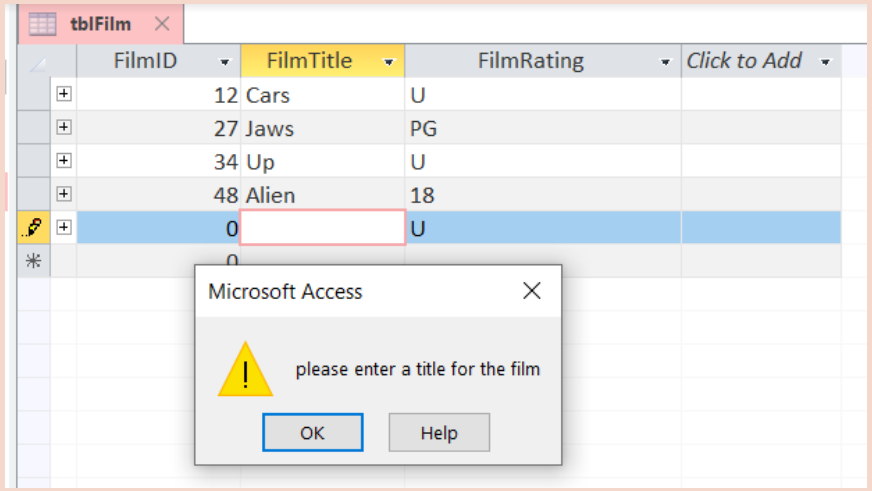
Test 1 - a film record will not save without the title of the film being present

Test No.	Type of Test (N,R,X)	Test Data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected
1	R	Title not supplied	An error message will be displayed		

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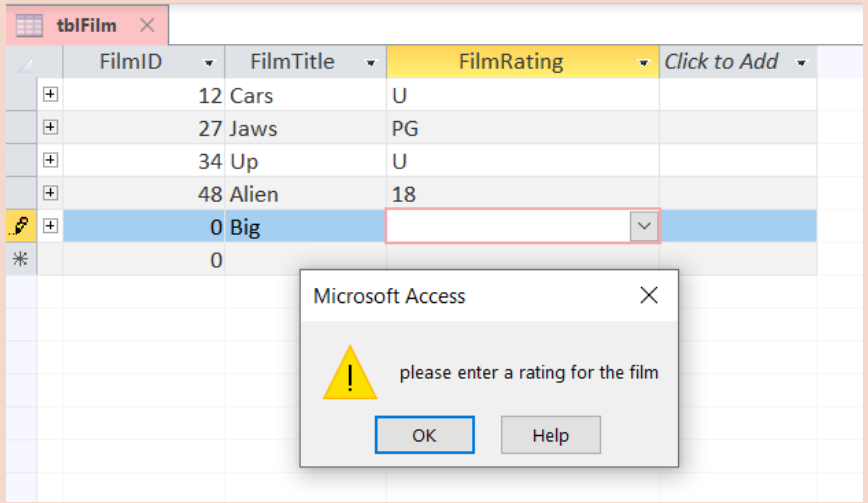
Test 2 - 1. A film record will not save if the rating is missing

Test No.	Type of Test (N,R,X)	Test Data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected
2-1	R	Rating is not supplied	An error message will be displayed		

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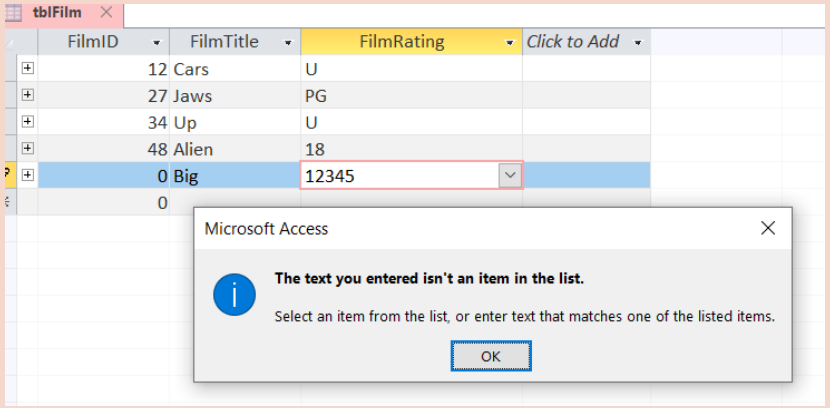
Test 2 – 2. A film record will not save if the rating is incorrect

Test No.	Type of Test (N,R,X)	Test Data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected
2-2	X	12345	An error message will be displayed		

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Glossary of Terms

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Glossary – Relational Database 1

Key Term	Definition
Attribute	Another name for a Column (or Field) in a Table in a Database.

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Glossary – Relational Database 2

Key Term	Definition
Entity Relationship	How data inside one Table is linked to data inside another Table in the same database. Relationships can be one:one, one:many and many:many.

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Glossary – Relational Database 3

Key Term	Definition
Candidate Key	When you have identified some columns that MIGHT be a good Primary Key.

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Glossary – Relational Database 4

Key Term	Definition
One to One relationship	When a Record in one table has a match with one **AND ONLY ONE** Record in another table. The Record in the second table matches one **AND ONLY ONE** Record in the first Table.

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Glossary - Normalisation

Key Term	Definition
Cascading Update	When any Updates made in one Table are reflected in other Tables that are Joined by a Foreign Key.

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Glossary – SQL

Key Term	Definition
Query	The process of asking a Database a question to get a specific answer.

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